REGULATION 7.08 Standards of Performance for New Process Operations

Air Pollution Control District of Jefferson County
Jefferson County, Kentucky

Relates to: KRS Chapter 77 Air Pollution Control
Pursuant to: KRS Chapter 77 Air Pollution Control
Necessity and Function: KRS 77.180 provides that the Air Pollution Control Board may make and enforce all orders, rules, and regulations necessary or proper to accomplish the purposes of KRS Chapter 77. This regulation provides for the control of particulates and nitrous oxide emissions from new sources.

SECTION 1 Applicability
This regulation applies to each process operation that is the affected facility not otherwise regulated by other regulations of Regulation 7 and that commenced construction after September 1, 1976.

SECTION 2 Definitions
Terms used in this regulation that are not defined in this regulation shall have the meaning given them in Regulation 1.02 *Definitions*.

2.1 "Affected facility" as related to process operations means the last operation preceding the emission of air contaminants that results:

2.1.1 In the separation of the air contaminant from the process materials, or

2.1.2 In the conversion of the process materials into air contaminants, but does not include an air abatement operation.

2.2 "Duplicate operation" means any combination of two or more individual process operations of any size that are of the same nature and are located at the same stationary source.

2.3 "Process operation" means any method, form, action, operation, or treatment of manufacturing or processing, and shall include any storage or handling of materials or products before, during, or after manufacturing or processing.

2.4 "Process weight" means the total weight of all materials introduced into any affected facility that may cause any emission of particulate matter, but does not include liquid and gaseous fuels charged, air, or uncombined water.

2.5 "Process weight rate" means a rate established as follows:

2.5.1 For continuous or long-run steady state operations, the total process weight for the entire period of continuous operation or for a typical portion of continuous operation divided by the number of hours of that period or portion of that period, or

2.5.2 For cyclical or batch unit operations or unit processes, the total process weight for a period that covers a complete operation or an integral number of cycles divided by the hours of actual process operation during that period.

If the nature of any process operation or the design of any equipment would permit more than one interpretation of this definition, then the interpretation that results in the minimum value for allowable emissions shall apply.

SECTION 3 Standard for Particulate Matter

3.1 No owner or operator shall cause to be discharged into the atmosphere from any affected facility, or from any air pollution control equipment installed on any affected facility, any gases that may contain particulate matter that:

3.1.1 Is equal to or greater than 20% opacity or

3.1.2 Is in excess of the quantity in Table 1.

3.2 No person shall cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility that is equal to or greater than 20% opacity.

3.3 Mass Emission Standard

3.3.1 The process weight rate entry to be used in Table 1 for duplicate new process operations is the total or combined process weight rate of all the individual component operations.

3.3.2 In the event of expansion of any process or duplicate operations that were in existence or under construction as of September 1, 1976, by the addition of a new process or new duplicate operation, the total allowable emission rate for all process or duplicate operations shall be determined by the following equation:

$$F = B + D - E$$

where:

F = Total allowable emission rate for new and existing process operations.

B = Allowable emission rate for existing operations determined by entering A into Regulation 6.09 *Standards of Performance for Existing Process Operations* Table 1.

A = Total process weight for those process operations in existence or under construction as of September 1, 1976.

D = Allowable emission rate that would be obtained if the new and existing process operations were treated as new operations determined by entering C into Table 1 of this regulation.

C = Total process weight for both the new and existing process operations.

E = Allowable emission rate that would be obtained if the existing operations were treated as new operations determined by entering A into Table 1 of this regulation.

3.3.3 To determine an allowable emission rate for each stack when duplicate operations vent through separate stacks, the following formula shall be used:

$$E_s = \frac{E_t \ P_s}{P_t}$$

where:

E_s = Allowable emission rate for the individual stack.

E_t = Total allowable emission rate for the duplicate operation from Table 1.
P_s = Process weight rate for process operations vented through the individual stack.
P_t = Total process weight rate for the duplicate operation.

3.3.4 If a single process operation is vented through multiple stacks, then the allowable emission rate for all stacks venting the source shall be equal to the allowable emission rate as if the source vented through a single stack.

SECTION 4 Standard for Nitrogen Oxides

No owner or operator shall cause to be discharged into the atmosphere from any affected facility or from any air pollution control equipment installed on any affected facility any NO_x fumes in excess of:

4.1 300 ppm by volume expressed as NO_2, or

4.2 An invisible discharge.

Adopted v1/7-14-76; effective 9-1-76; amended v2/11-16-83, v3/3-17-99.

Table 1 to Regulation 7.08

Allowable Rate of Particulate Emissions Based on Process Weight for Affected Facilities

Process Weight Rate		Maximum Allowable Emission Rate
Lb/Hr.	**Tons/Hr.**	**Lb/Hr.**
≤ 1,000	≤ 0.50	2.34
1,500	0.75	3.00
2,000	1.00	3.59
2,500	1.25	4.12
3,000	1.50	4.62
3,500	1.75	5.08
4,000	2.00	5.52
5,000	2.50	6.34
6,000	3.00	7.09
7,000	3.50	7.81
8,000	4.00	8.48
9,000	4.50	9.12
10,000	5.00	9.74
12,000	6.00	10.90
16,000	8.00	13.03
18,000	9.00	14.02
20,000	10.00	14.97
30,000	15.00	19.24
40,000	20.00	23.00
50,000	25.00	26.41
60,000	30.00	29.57
70,000	35.00	30.57
80,000	40.00	31.23
90,000	45.00	31.83
100,000	50.00	32.37
120,000	60.00	33.33
140,000	70.00	34.16
160,000	80.00	34.90
200,000	100.00	36.17
1,000,000	500.00	46.79
2,000,000	1,000.00	52.28
6,000,000	3,000.00	62.32

Interpolation of the data for process weight rates up to 60,000 1b/hr shall be accomplished by use of the equation

$$E = 3.59\ P^{0.62}$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 1b/hr shall be accomplished by the use of the equation

$$E = 17.31\ P^{0.16}$$

where:

E = rate of emission in 1b/hr.
P = process weight rate in tons/hr.